

**CH 3.81/02/180F 3.5SN GN BX**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany

[www.weidmueller.com](http://www.weidmueller.com)

**General ordering data**

|              |                                     |
|--------------|-------------------------------------|
| Order No.    | <a href="#">2643230000</a>          |
| Type         | CH 3.81/02/180F 3.5SN GN BX         |
| GTIN (EAN)   | 4050118643749                       |
| Qty.         | 624 pc(s).                          |
| Product data | IEC: 320 V / 8 A<br>UL: 300 V / 8 A |
| Packaging    | Box                                 |

Creation date December 4, 2023 10:53:31 AM CET

Catalogue status 24.11.2023 / We reserve the right to make technical changes.

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## Technical data

## Dimensions and weights

|            |        |
|------------|--------|
| Net weight | 1.36 g |
|------------|--------|

## System specifications

|                                 |                            |                                |                  |
|---------------------------------|----------------------------|--------------------------------|------------------|
| Product family                  | OMNIMATE basic – Series CH | Type of connection             | Board connection |
| Mounting onto the PCB           | THT solder connection      | Pitch in mm (P)                | 3.81 mm          |
| Pitch in inches (P)             | 0.15 inch                  | Outgoing elbow                 | 180°             |
| Number of poles                 | 2                          | Number of solder pins per pole | 1                |
| Solder pin length (l)           | 3.5 mm                     | Solder pin dimensions          | 0.8 x 0.8 mm     |
| Solder eyelet hole diameter (D) | 1.3 mm                     | L1 in mm                       | 3.81 mm          |
| L1 in inches                    | 0.15 inch                  | Number of rows                 | 1                |
| Pin series quantity             | 1                          |                                |                  |

## Material data

|                             |          |                             |            |
|-----------------------------|----------|-----------------------------|------------|
| Insulating material         | PA GF    | Colour                      | Pale green |
| Colour chart (similar)      | RAL 6021 | Insulating material group   | I          |
| UL 94 flammability rating   | V-0      | Contact base material       | Cu-alloy   |
| Contact material            | Cu-alloy | Contact surface             | tinned     |
| Tinning type                | matt     | Storage temperature, min.   | -40 °C     |
| Storage temperature, max.   | 70 °C    | Operating temperature, min. | -40 °C     |
| Operating temperature, max. | 105 °C   |                             |            |


## Rated data acc. to IEC

|   |        |   |        |
|---|--------|---|--------|
| Rated current, min. number of poles (Tu=20°C)                             | 8 A    | Rated voltage for surge voltage class / pollution degree II/2         | 320 V  |
| Rated voltage for surge voltage class / pollution degree III/2            | 160 V  | Rated voltage for surge voltage class / pollution degree III/3        | 160 V  |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 2.5 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 2.5 kV |   |        |

## Rated data acc. to CSA

|                                   |       |                                   |     |
|-----------------------------------|-------|-----------------------------------|-----|
| Rated voltage (Use group B / CSA) | 300 V | Rated current (Use group B / CSA) | 8 A |
|-----------------------------------|-------|-----------------------------------|-----|

## Rated data acc. to UL 1059

|                                       |   |                                       |        |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (cURus)                     |  | Certificate No. (cURus)               | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V   | Rated current (Use group B / UL 1059) | 8 A    |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.              |                                       |        |

## Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 171 mm |
| VPE width | 136 mm | VPE height | 52 mm  |

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**Technical data****Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002637    | ETIM 7.0    | EC002637    |
| ETIM 8.0    | EC002637    | ETIM 9.0    | EC002637    |
| ECLASS 9.0  | 27-44-04-02 | ECLASS 9.1  | 27-44-04-02 |
| ECLASS 10.0 | 27-44-04-02 | ECLASS 11.0 | 27-46-02-01 |
| ECLASS 12.0 | 27-46-02-01 | ECLASS 13.0 | 27460201    |

**Environmental Product Compliance**

|            |                                      |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1                       |
| SCIP       | 2f5e7231-4ad1-4dcb-8e0f-b14defbd9d78 |

**Important note**

|       |   |
|-------|---|
| Notes | <ul style="list-style-type: none"> <li>• Only compatible with OMNIMATE basic products</li> <li>• P on drawing = pitch</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.</li> <li>• In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul> |
|-------|---|

**Approvals**

|                         |   |
|-------------------------|---|
| Approvals               |  |
| ROHS                    | Conform   |
| UL File Number Search   | UL Website  |
| Certificate No. (cURus) | E60693  |

**Downloads**

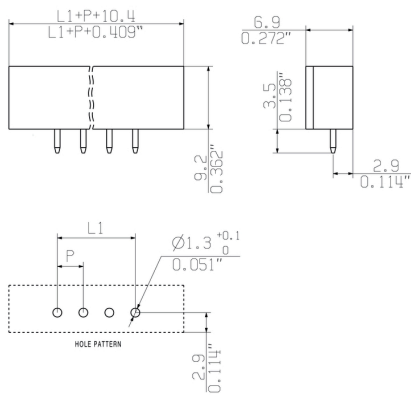
|                  |  |
|------------------|--|
| Engineering Data | <a href="#">CAD data – STEP</a>          |
| Catalogues       | <a href="#">Catalogues in PDF-format</a> |

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Drawings



## Recommended wave soldering profiles

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### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.